

AMENDMENTS TO THE ABSTRACT:

Please replace the Abstract as filed with the following revised Abstract:

An object of the present invention is to efficiently adjust a positional difference (measured along the direction perpendicular to the center electrode axis) between the center electrode (CE) axis and the center of the earth electrode (EE). The CE tip and EE-end tip surface are illuminated from the front of the EE-tip tip surface, thereby picking up their images. The image processing unit calculates the positional difference between the CE axis and EE center. Here, the EE center is defined by an area centroid of the EE tip surface area, thereby improving a measurement accuracy. The adjustment unit connected with the image processing unit causes the actual positional difference to decrease by moving EE by the that calculated positional difference, taking a prescribed spring-back into consideration. EE is moved by a jig moved by a screw rotated by a motor.